

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Tooth Brush.

I, ROBERT ROSCOE MYERS, Dentist, of 1795, North Wilcox Avenue, Hollywood, State of California, United States of America, a citizen of the United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to adjustable tooth brushes of the kind in which the brush head is angularly adjustable and is fixed in any position to which it is adjusted by means of a frictional clamping device carried by a handle, and the object of the invention is to provide an improved construction or arrangement which will securely hold the brush at any desired angle to the longitudinal axis of the brush handle, and which will permit of instant adjustment or detachment of the brush head.

According to the invention the brush head is carried by a frictional clamping device on the handle adapted to engage a stud on the brush head and consisting of a clamping ring adapted to be contracted to grip the stud in any angular position to which it has been adjusted or expanded to permit the stud to be withdrawn.

Reference will now be made to the accompanying drawings, in which:—

Fig. 1 is a side elevation of the complete brush.

Fig. 2 is a plan view of the same.

Fig. 3 is an enlarged partial plan view of the brush end portion, parts being shown in section, and a plurality of brush adjustments being shown in dotted lines.

Fig. 4 is an enlarged transverse section of the brush taken on line 4—4 of Fig. 1.

Fig. 5 is an enlarged transverse section of the brush through the adjusting nut, taken on line 5—5 of Fig. 1.

Fig. 6 is a perspective view of a modified form of brush.

Referring now more particularly to the drawings, the handle 5 of the brush is substantially flat and curved at its outer end in order to conform to a person's hand, and is formed of any desired material. Rigidly secured to the outer end of the handle in a suitable manner is a metal member 6, provided just beyond its point of attachment to the handle 5 with an elongated opening 7, the outer end 8 being of tubular form elliptical in cross section, the extreme end 9 of the member 6 being slightly flared outwardly.

Mounted within the tubular portion 8 is a clamping device 10, which consists of a flat metal member provided with a circular head 11, having a circular opening 12 formed therein, its oppositely disposed sides 13 and 14 tapering inwardly from the outer end portion to the rear portion of the member. Extending from opening 12 inwardly is a slot 15 that terminates midway the length of the clamp member, to form spring clamping arms 16 and 17. The inner end of member 10 is also provided with a threaded stud 18 that is engaged by an adjusting nut 19 disposed within the opening 7 of the metal member 6.

The adjustable tooth brush member preferably consists of a back 20 formed of a suitable material provided on its lower face with a plurality of usual brush bristles 21. Secured in clamped relation to its oppositely disposed sides 22 and 23 and midway between its ends is a metal clamping member 24 provided on its upper surface with a cylindrical stud 25, whose side wall tapers slightly from its upper end to the back 20 of the brush in order to form a perfect clamping surface when engaged by the circular opening 12 of the metal clamping member mounted on the brush handle.

By rotating the adjusting nut 19 the clamping device 10 will be drawn rearwardly, the flared outer end of member 6 forcing the spring arms 16 and 17 together so as to cause the circular apertured end of the clamp 10 to firmly engage the tapered wall of stud 25 and thus hold the brush in frictional clamped engagement with the handle.

As the brush is secured to the handle solely by frictional engagement with the handle clamping member it will be noted that it may be readily turned and adjusted to various positions as clearly shown in Fig. 3 without operating the adjusting nut 19.

In Fig. 6 I have shown a modified form of brush in which the clamping member 24 is dispensed with, the stud 25 being formed integral with the back of the brush 20 and preferably of the same material, this form being considered important as it may be manufactured much more economically than the form first described.

It is well understood that a person's teeth should be brushed in a vertical direction towards and away from the gums. By providing a comparatively small brush that may be instantly adjusted at various angles with respect to the handle, a person may readily brush the teeth in such manner, and further the interior surfaces may be readily reached for cleansing.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A tooth brush having an angularly adjustable brush head carried by a

frictional clamping device on the handle adapted to engage a stud on the brush head, wherein the frictional clamping device comprises a clamping ring adapted to be contracted to grip the stud in any angular position to which it has been adjusted or expanded to permit the stud to be withdrawn.

2. A tooth brush, as set forth in Claim 1 in which the stud clamping means has a stud receiving opening in its outer end and rearwardly extending spaced portions joined to a screw threaded rod, whereby the size of the stud opening may be decreased in diameter by drawing said portions together by a nut cooperating with a member adapted to bear against the clamping ring.

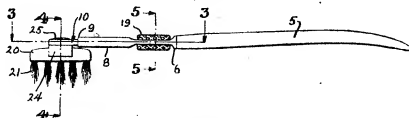
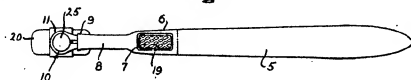
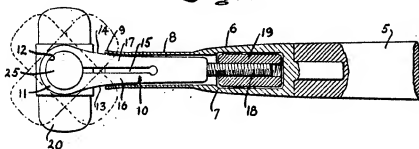
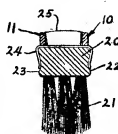
3. A tooth brush, as set forth in Claim 2 including a socket on said handle, in which said rearward extending portions are disposed, so that upon actuating said nut, which is located in a slot formed in the socket, said portions may be drawn further into the socket.

4. A tooth brush as set forth in Claims 1 and 2, in which the rear portion of the clamping member is flattened to permit the adjusting element of said clamping member to project beyond the flattened portion and to become readily accessible.

5. A tooth brush, substantially as described and shown, and for the purpose set forth.

Dated this 22nd day of January, 1927.

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Fig. 1*Fig. 2**Fig. 3**Fig. 4**Fig. 5**Fig. 6*